

REMARKS

Applicant has reviewed the Office Action dated as mailed January 30, 2003 and the documents cited therewith. After the above amendments have been made, the present application contains claims 1-3 and 5-29. Claims 1-3, 6-10, 12-15, 22, 23 and 25 have been amended. Claim 4 has been cancelled. Applicant believes the foregoing amendments place the application in condition for allowance. Entry of the amendments and allowance of the application at an early date is respectfully requested.

The Office Action did not cite any documents or grounds for rejection of independent claim 12 and dependent claim 13. Accordingly, Applicant respectfully requests withdrawal of the final rejection in the present application so that any grounds for rejection as to claims 12 and 13 may be properly made and responded to by Applicant.

Claim Objections

Claim 14 was objected to because line 9 of the claim comprises an incomplete sentence. Claim 16 was objected to because the phrase "to adhesive" in line 2 is idiomatic English.

Claim 14 has been amended to complete the sentence. Claim 16 was amended in a Preliminary Amendment to read as indicated in this Amendment and is believed to be correct. Reconsider and withdrawal of the objections to claims 14 and 16 is respectfully solicited.

Claim Rejections under 35 U.S.C. §112

Claims 2-11 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite "a first metallized surface" and "a second nonmetallized surface." The Office Action indicated that it is unclear whether the claims are trying to differentiate between a first surface that is metallized and second surface that is nonmetallized, or whether the claimed polymeric moisture barrier comprises more than one metallized surface and nonmetallized surface. Claims 2-11 have been amended to recite "a metallized surface" and "a nonmetallized surface."

Claims 2-11 were further rejected under 35 U.S.C. § 112 in that the phrase "low charge retaining coating" is indefinite because the original disclosure does not provide one of ordinary

skill in the art any guidance in how to determine when a composition is considered "low charge retaining." The specification on page 9 beginning at line 19 and continuing on page 10 recites:

"The low charge-retaining coating 4 is a polymer, a preferably carbon loaded acrylic. Other polymers such as polyurethane, polyethylene, polypropylene could be used. Other conductive particles may be used to load the polymers such as silver, copper, metal flake, stainless fiber, DuPont Zelic and the like. The low charge-retaining coating preferably has a conductivity of 1×10^{-7} Siemens but may range between 1×10^{-3} and 10^{-9} Siemens."

Applicant respectfully submits that a person of ordinary skill in the art would know how to form the "low-charge retaining coating" from the above recitation.

Applicant respectfully submits that claims 2-11 satisfy the requirements of 35 U.S.C. §112, and reconsideration and withdrawal of the rejection of claims 2-11 under Section 112 is respectfully requested.

Claims 14-22 were also held to be indefinite because the phrase "dimensionally stable" is not defined in the specification. Claims 14-22 have been amended to more particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Accordingly, reconsideration and withdrawal of the 35 U.S.C. §112 rejection of these claims is respectfully requested.

Claim Rejections under 35 U.S.C. §103

Claims 1-6, 8-10, 27 and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 4,756,414 to Mott (hereinafter Mott) in view of U.S. Patent 4,699,830 to White (hereinafter White).

Mott discloses an antistatic sheet material. Referring to Figure 3 of Mott, the antistatic sheet material includes a heat sealable plastic material layer 30 with an antistatic material layer 36 on at least one major surface 32. A second flexible plastic layer 38 is laminated to the first plastic material layer 30 with an electrically conductive material layer 44 on one major surface 40 and antistatic properties 36' on the other major surface 42. Mott in column 5 beginning at line 46 recites:

"Electrically conductive layer 44 is preferably formed by depositing a thin layer of metal on primary major surface 40 of layer 38... Optionally, electrically conductive layer 44 may be a coated or laminated metal grid, a metal filled plastic film or other conductive material... Layer 44, if vacuum deposited or sputtered, is preferably about 50 to about

200 Angstroms thick, and most preferably about 100 Angstroms thick. Its surface resistivity is preferably about 100 ohms/sq. The coating may be discontinuous and/or have pinholes therein with no substantial adverse affect on the Faraday-cage structure which results when the package is formed." (emphasis added)

Mott further recites in Column 5 beginning at line 57:

"It is preferred that the combination of layers 38, 44 and 30 be partially transparent or transparent to permit visual inspection of the contents of the package without the need for opening the package."

Because Mott permits the metal layer 44 to be discontinuous and/or have pinholes and prefers that the combination of layers be partially transparent or transparent, Mott shows no recognition for the moisture barrier problem solved by the present invention. Applicant respectfully submits that there is no suggestion or motivation in Mott that the laminated structure of Mott could be combined with other layers or structures to form at least two moisture barriers as provided by the present invention as recited in the claims. Furthermore, to combine Mott with other layers would diminish, if not eliminate Mott's preferred characteristic that the laminated structure be partially transparent or transparent.

White discloses a laminated sheet material for packaging electronic components. Referring to Figure 2 of White, White discloses a laminated sheet material for packaging electronic components including an antistatic layer 20, a first conductive metal layer 22 adhered to the antistatic layer 20 by an adhesive 24. A carrier film layer 26 is disposed on the first metal layer 22 and a second metal layer 28 disposed on the carrier film layer 26. A transparent, protective topcoat layer 30 is disposed on the second metal layer 28 for protection of the second metal layer 28. White in column 4, beginning at line 29 recites:

"The first metal layer is provided in a thickness which provides a transparency to the layer. The metal is deposited onto the substrate layer in a thin layer to allow transmission of light through the metal layer. The thickness of the metal layer can vary depending upon the metal selected since the controlling criteria for the amount of metal in the layer is the preferred surface resistivity to be provided by the metal layer."

White in column 5, beginning at line 50 further recites:

"It is preferred that the first conductive metal layer, substrate, and second conductive metal layer provide light transmission in the range from about 15% to about 70% and, more preferably, a light transmission range of 30% to 45%. The three layers are selected to provide such light transmittance as it is desirable to provide a laminated sheet material

for packaging or envelopes wherein any component placed in the package or envelope can be readily viewed through the sidewall."

Because White also prefers that the laminated sheet material be thin to allow transmission of light, White also shows no recognition of the moisture barrier problem solved by the present invention as recited in the claims of the present application which provides first and second moisture barriers. White further shows no recognition for the moisture barrier problem solved by the present invention because White states, in the quoted recitation above, that the controlling criteria for the amount or thickness of metal in the layer is to provide the preferred surface resistivity. Because White desires the laminated sheet material to permit any component inside to be viewed through the packaging, Applicant respectfully submits there is no teaching, suggestion or motivation in White to combine the laminated package of White with any other layers so as to provide the dual moisture barrier structure of the present invention as recited in the claims.

MPEP §2143.01 states that the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. As discussed above, because both Mott and White desire that their structures be at least partially transparent, there is no teaching or suggestion that their structures should be combined with other layers to provide a dual moisture barrier structure as provided by the present invention as recited in the claims. Accordingly, a person of ordinary skill in the art would not be motivated to combine the teachings of Mott and White to provide the present invention.

Even if it were proper to combine the teaching of Mott and White, they still would not provide the present invention as recited in amended claim 1. Claim 1 has been amended to recite:

"a first moisture barrier, said first moisture barrier having a nonmetallized surface attached to the heat sealable static dissipative polymer by a tie layer; a second moisture barrier attached to the first moisture barrier, said second moisture barrier having a metallized surface..."

In contrast, as discussed above, neither Mott nor White, considered individually or combined teach or suggest a first moisture barrier and a second moisture barrier. Mott as discussed above teaches that his metal layer may be discontinuous and have pin holes. Additionally, both Mott

and White teach a metal layer attached to the antistatic layer. In contrast, the present invention as recited above requires a nonmetallized surface of the first moisture barrier be attached to the heat sealable static dissipative polymer or antistatic layer.

For all of the reasons discussed above, Applicant respectfully submits that claim 1 is patentably distinguishable over Mott and White, whether considered individually or collectively, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 1 is respectfully solicited.

Turning to the rejection of independent claim 2 under 35 U.S.C. §103(a) as being unpatentable over Mott in view of White, Applicant respectfully submits that there is no motivation, suggestion or teaching to combine the teachings of Mott and White as discussed above. Even if Mott and White could properly be combined, they still would not provide the present invention as recited in amended claim 2. Claim 2 has been amended to recite:

"a first polymeric moisture barrier having two surfaces, a metallized surface and a nonmetallized surface, said nonmetallized surface of said first polymeric moisture barrier being attached to said heat sealable static dissipative polymer by a first tie layer; a second polymeric moisture barrier having two surfaces, a metallized surface and a nonmetallized surface, said nonmetallized surface of said second polymeric moisture barrier being attached to said first polymeric moisture barrier by a second tie layer..."

In contradistinction, neither Mott nor White teaches or suggests a first polymeric moisture barrier and a second polymeric moisture barrier each including a metallized surface and a nonmetallized surface. Mott and White also do not teach or suggest a first moisture barrier attached to a second moisture barrier by a tie layer. Additionally, as discussed above, both Mott and White teach a metal layer attached to the antistatic or static dissipative layer. Accordingly, neither Mott nor White teaches or suggests a nonmetallized surface of the first polymeric moisture barrier being attached to the heat sealable static dissipative polymer as required by claim 2. Therefore, Applicant respectfully submits that amended claim 2 is patentably distinct over Mott and White, whether considered individually or collectively, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 2 is respectfully requested.

With respect to the rejection of claims 3-6 and 8-10 under 35 U.S.C. §103 as being unpatentable over Mott in view of White, claim 4 has been cancelled and the remaining claims depend either directly or indirectly from independent claim 2. By virtue of that dependency,

claims 3, 5, 6 and 8-10 contain all of the features of independent claim 2. Additionally, these claims recite additional features that further patentably distinguish over Mott and White. As previously discussed, neither Mott nor White teach or suggest first and second moisture barriers attached by tie layers that are adhesives as provided in claim 3. Claim 6 recites "a material as in claim 2 wherein the heat sealable static dissipative polymer has a conductivity of between 10^{-1} and 10^{-10} Siemens." In contrast, Mott in column 4 beginning at line 50 recites:

"Antistatic material 36 provides a surface conductivity in the range from about 10^6 to about 10^{11} ohms/sq."

and White at column 4 beginning at line 17 recites:

"A preferred surface resistivity for the antistatic polyolefin based material would be a surface resistivity of from about 10^8 to about 10^{13} ohms per square."

Accordingly, the surface conductivity of antistatic material 36 of Mott is equivalent to a range from about 10^6 to about 10^{11} Siemens and the surface conductivity of the antistatic layer 20 of White is equivalent to a range from about 10^8 to about 10^{13} Siemens. Therefore, neither Mott nor White teach or suggest that the heat sealable static dissipative polymer has a range of resistivity of 10^{-1} to 10^{-10} Siemens as taught by the present invention as recited in claim 6.

For all of the reasons discussed above, Applicant respectfully submits that claims 3, 5, 6 and 8-10 are patentably distinguishable over Mott and White, whether considered individually or combined, and reconsideration and withdrawal of the Section 103 rejection of these claims is respectfully requested.

With respect to the rejection of claims 27 and 28 under 35 U.S.C. §103 as being unpatentable over Mott in view of White, claim 27 depends directly from independent claim 1 and claim 28 depends directly from independent claim 2. By virtue of these dependencies, claims 27 and 28 include all of the features of independent claims 1 and 2 respectively. Each of claims 27 and 28 also recite "wherein the moisture penetration rate is less than .02 grams per 100 square inches per 24 hours." In contrast, as discussed above, there is no motivation to combine Mott and White. Furthermore, neither Mott nor White teach or suggest a moisture barrier let alone a first and second moisture barrier with the moisture penetration rate recited in dependent claims 27 and 28. Therefore, Applicant respectfully submits that claims 27 and 28 are patentably distinguishable over Mott and White, whether considered individually or combined, and

reconsideration and withdrawal of the 35 U.S.C. §103 rejection of these claims is respectfully solicited.

Claim 7 was rejected under 35 U.S.C. §103 as being unpatentable over Mott in view of White and further in view of U.S. Patent 4,293,070 to Ohlbach (hereinafter referred to a Ohlbach). As previously discussed, Mott and White are not properly combinable and even they could properly be combined, Mott and White do not provide the present invention as recited in amended claim 2. Claim 7 depends directly from independent claim 2 and by virtue of that dependency contains all of the features of claim 2. Ohlbach teaches forming a carbon black trap for static electricity by applying a coating of carbon black to a web of paper board laminated to at least one other paper board. See column 2 beginning at line 66 and continuing in column 3. Applicant respectfully submits that Ohlbach adds nothing to Mott or White, whether considered individually or collectively, so as to render claim 2 unpatentable. Additionally, Ohlbach teaches coating a laminated paper board with carbon black and does not teach or suggest a carbon-coated polymer with a conductivity of between 1×10^{-3} and 1×10^{-9} Siemens as recited in claim 7. Therefore, claim 7 is respectfully submitted to be patentably distinguishable over Mott, White and Ohlbach, whether considered individually or combined, and reconsideration and withdrawal of the Section 103 rejection of claim 7 is respectfully solicited.

Claim 11 was rejected under 35 U.S.C. §103 as being unpatentable over Mott in view of White and further in view of U.S. Patent 4,906,517 to Akao (hereinafter referred to a Akao). Akao discloses a packaging material for photosensitive materials. In column 5 beginning at line 21, Akao recites:

"The light-shielding ethylene copolymer resin film layer contains a light-shielding material. The light-shielding material includes every material capable of shielding visible light and ultraviolet light."

As previously discussed, both Mott and White desire that their packaging material be light transmissive and not light-shielding as required by Akao. As stated in MPEP §2143.01 the mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggest the desirability of the combination. Accordingly, Applicant respectfully submits that Akao teaches away from Mott and White and there is no teaching or suggestion in Akao, Mott and White that their teaching may be combined to provide

the present invention as recited in the claims. Even if Akao, Mott and White could properly be combined, Akao adds nothing to Mott and White so as to render independent claim 2 unpatentable. Claim 11 depends directly from claim 2 and therefore contains all of the features thereof. Applicant therefore submits that claim 11 is also patentably distinguishable over Mott, White and Akao, whether considered individually or collectively, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 11 is respectfully requested.

Claims 1, 14-18, 22, 27 and 29 were rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent 5,180,615 to Havens (hereinafter Havens) in view of White and U.S. Patent 5,180,615 to Dahringer et al. (hereinafter Dahringer). Havens discloses a metallized bag for static protection of electronic components. Havens in column 3 beginning at line 46 recites:

"The thinner the metal layer, the more transparent is the finished bag of metal laminated to [the] antistatic layer. Of course, it is more desirable that the bag be transparent enough so that code numbers printed on the circuit board packaged in the bag can be read."

Because Haven desires that the package or bag be as thin as possible so that a printed code number can be read through the bag, Applicant respectfully submits there is no teaching, suggestion or motivation in Havens to combine his laminated structure with other layers so as to provide the dual moisture barrier structure of the present invention as recited in the claims. Further, Havens shows no recognition of the moisture barrier problem solved by the present invention.

Dahringer discloses an assembly for protecting active electronic components from electromagnetic interference (EMI) that includes an inner polymeric layer 54 and an outer polymeric layer 53 as shown in Figures 5 and 6. As clearly shown in Figures 5 and 6 and as described in column 6 of Dahringer beginning at line 3, Dahringer teaches that the polymeric layers and metallic layer 52 may be patterned. Accordingly, Dahringer also shows no recognition of the moisture barrier problem solved by the present invention as recited in the claims and would not combine Dahringer with any other structure to form the multiple moisture barrier structure of the present invention. Additionally, Dahringer recites in column 6, beginning at line 55 that the polymer layers 53 and 54 (the outer and inner layers in Figures 5 and 6) can also be electrically insulating, thereby preventing the metallized layer 52 from forming an unwanted electrical connection to external or internal parts. Accordingly, Dahringer teaches

away from Havens and White which both teach antistatic inner and outer layers to bleed off any static charge. For all of the reasons discussed above, a person of ordinary skill in the art would not be motivated to combine the teaching of Havens, White and Dahringer.

Even if it were proper to combine the teaching of Havens, White and Dahringer, they still would not provide the present invention as recited in amended claim 1. Claim 1 has been amended to recite:

"a first moisture barrier, said first moisture barrier having a nonmetallized surface attached to the heat sealable static dissipative polymer by a tie layer;
a second moisture barrier attached to the first moisture barrier, said second moisture barrier having a metallized surface..."

In contrast, as previously discussed, neither Havens, White nor Dahringer teach or suggest a first moisture barrier and a second moisture barrier attached to the first moisture barrier.

Additionally, Havens teaches a single metal layer disposed over an antistatic layer with optionally a polymeric insulative layer between the single metal layer and the antistatic layer. Applicant respectfully submits that there is no teaching or suggest in Haven of a nonmetallized surface of the first moisture barrier being attached to the heat sealable static dissipative polymer by a tie layer as provided in claim 1 as amended.

Referring to Figure 2 of White, White teaches a first conductive metal layer 22 attached to the antistatic layer 20 by an adhesive bond 24. Therefore, Applicant respectfully submits that White does not teach or suggest a nonmetallized surface of a first moisture barrier attached to a heat sealable static dissipative polymer by a tie layer as provided by claim 1.

Claim 1 also recites:

"a low charge retaining coating attached to the metallized surface of the second moisture barrier."

In contrast, as previously discussed, Dahringer in column 6 beginning at line 55 states that polymer layers 53 and 54 can be electrically insulating to prevent the metallized layer 52 from forming an unwanted electrical connection to external and internal parts. Accordingly, Dahringer does not teach or suggest a nonmetallized surface of a first moisture barrier attached to a heat sealable static dissipative polymer by a tie layer and a low charge retaining coating attached to the metallized surface of a second moisture barrier.

For all of the reasons discussed above, Applicant respectfully submits that claim 1 is patentably distinct over Havens, White and Dahringer, whether considered individually or collectively, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 1 is respectfully solicited.

Turning to the rejection of independent claim 14 under 35 U.S.C. §103 as being unpatentable over Havens in view of White and Dahringer, as previously discussed there is no motivation to combine the teaching of Havens, White and Dahringer. Even if Havens, White and Dahringer could properly be combined, they still would not provide the present invention as provided in amended claim 14. Claim 14 has been amended to recite:

"a dielectric polymer attached to the heat sealable static dissipative polymer by a first tie layer;
a metal foil attached to the dielectric polymer to form a first moisture barrier;
a second polymeric moisture barrier with a metallized surface and a nonmetallized surface said nonmetallized surface of said polymeric moisture barrier attached to the metal foil..."

In contrast, neither Havens, White nor Dahringer, whether considered individually or collectively, teach or suggest a metal foil attached to a dielectric polymer to form a first moisture barrier with the dielectric polymer being attached to a static dissipative polymer by a tie layer. Neither do Havens, White and Dahringer teach or suggest a second polymeric moisture barrier with a metallized surface and a nonmetallized surface, the nonmetallized surface being attached to the metal foil as required by claim 1. Havens teaches a single metal layer attached to an antistatic layer with optionally an insulative layer between the metal layer and the antistatic layer and does not teach or suggest a tie layer as required by claim 14. White teaches a metal layer 22 attached to an antistatic layer 20 and does not teach or suggest a nonmetallized surface of first moisture barrier being attached to a static dissipative polymer as provided by the present invention in claim 14. Dahringer does not teach or suggest a static dissipative polymer and a dielectric polymer of a first moisture barrier attached to the static dissipative polymer by a tie layer as provided in claim 14. For all of the reasons stated above, Applicant respectfully submits that claim 14 is patentably distinguishable over Havens, White and Dahringer, whether considered individually or combined, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 14 is respectfully requested.

With respect to the rejection of claims 15-18 and 22 under 35 U.S.C. §103 as being unpatentable over Havens, White and Dahringer, these claims contain additional features that further patentably distinguish over the cited documents. Claim 15 recites that the dielectric polymer is attached to the metal foil by a second tie layer and the second polymer moisture barrier is attached to the metal foil by a third tie layer. Applicant respectfully submits that there is no teaching or suggestion in Havens, White and Dahringer of the structure recited in claim 15. Additionally, these claims depend either directly or indirectly from independent claim 14 and by virtue of that dependency contain all of the features of independent claim 14. Therefore, Application respectfully submits that claims 15-18 and 22 also patentably distinguish over Havens, White and Dahringer, whether considered individually or collectively, and reconsideration and withdrawal of the Section 103 rejection as to these claims is respectfully requested.

With respect to the rejection of claim 27 under 35 U.S.C. §103 as being unpatentable over Havens, White and Dahringer, claim 27 recites:

"A film material as in claim 1 wherein the moisture penetration rate is less than .02 grams per 100 square inches per 24 hours."

As discussed above, Applicant respectfully submits that it is improper to combine the teaching of Havens, White and Dahringer and none of these documents teach or suggest a penetration rate as recited in claim 27. Additionally, claim 27 depends directly from independent claim 1 and by virtue of that dependency contains all of the features of claim 1. Accordingly, Applicant respectfully submits that claim 27 is also patentably distinguishable over Havens, White and Dahringer, whether considered individually or collectively, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 27 is respectfully requested.

With respect to the rejection of claim 29 under 35 U.S.C. §103 as being unpatentable over Havens, White and Dahringer, claim 29 recites the same features as claim 27. Additionally, claim 29 depends directly from claim 14 and by virtue of that dependency contains all of the features of claim 14. Therefore, Applicant respectfully submits that 29 is also patentably distinct over the cited documents, whether considered individually or combined, and reconsideration and withdrawal of the Section 103 rejection of claim 29 is also respectfully requested.

Claim 19 was rejected under 35 U.S.C. §103 as being unpatentable over Havens in view of White and Dahringer and further in view of U.S. Patent 4,738,882 to Rayford (hereinafter Rayford). Rayford was cited for teaching a insulating layer that may be biaxially oriented. Claim 19 depends indirectly from independent claim 14 and by virtue of that dependency contains all of the features of claim 14. Applicant respectfully submits that Rayford adds nothing to the teachings of Havens, White and Dahringer so as to render claim 14 unpatentable. Accordingly, Applicant respectfully submits that claim 19 is also patentably distinguishable over Havens, White, Dahringer and Rayford, whether considered individually or combined, and reconsideration and withdrawal of the 35 U.S.C. §103 rejection of claim 19 is respectfully requested.

Claims 20 and 21 were rejected under 35 U.S.C. §103(a) as being unpatentable over Havens in view of White, Dahringer, Rayford and Mott. As previously discussed, there is no motivation for combining the teachings of the documents and even if it were proper to combine their teachings, they still would not provide the present invention as recited in the claims. Claims 20 and 21 depend indirectly from independent claim 14 and by virtue of that dependency contain all of the features of claim 14. Accordantly, claims 20 and 21 are also patentably distinguishable over the cited documents, whether considered individually or combined, and reconsideration and withdrawal of the Section 103 rejection of these claims is respectfully solicited.

As previously discussed, the Office Action did not cite any art and grounds for rejection of independent claim 12 and dependent claim 13, and Applicant has requested withdrawal of the final rejection. Applicant respectfully submits, however, that claims 12 and 13 also recite features that patentably distinguish over the documents of record and would be allowable.

Applicant respectfully requests entry of this amendment under Rule 116 in that this amendment renders all of the claims in the present application in condition for allowance. Reconsideration and withdrawal of the rejections and allowance of the claims at the earliest possible date are respectfully requested.

In the event that the examiner wishes to discuss any aspect of this response, please contact the undersigned at the telephone number indicated below.

Respectfully submitted,

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